

Motion

There are three ways to describe motion:

1. in words
2. a mathematical equations
3. a graphing

Many different words with a precise scientific meaning are used to describe motion. There are 2 categories...

① scalars - have only a numerical value Ex: length, time

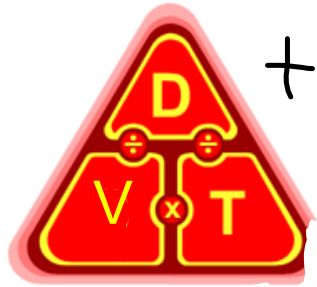
② vectors - have a numerical value and a direction
Ex: wind speed 30 km/h north
acceleration (speeding up)- positive
deccelaration(slowing down)-negative

Rearranging Formulas

- You must isolate the variable you are trying to solve for.
- To accomplish this you need to use the opposite operation that is indicated.

- EXAMPLE: *V - Velocity (speed)* *d - distance*
- $d = vt$ (rearrange for v) *t - time*
- Divide by t because vt is multiplication.

• $\frac{d}{t} = v$



$t = \frac{d}{v}$ $d = v \times t$

$v = \frac{d}{t}$

$$95 \text{ km/h} = 26 \text{ m/s}$$

18.

$$700 \text{ km/h} = ? \text{ m/s}$$

1 meter / second = 3.6
kilometers / hr

3.6

$$700 \div 3.6 =$$

$$\frac{700}{3.6} = 194.4 \frac{\text{m}}{\text{s}}$$

$$200 \frac{\text{m}}{\text{s}}$$

19

$$6.82 \frac{\text{m}}{\text{s}} = \text{---} \frac{\text{km}}{\text{h}}$$

$$6.82 \times 3.6 = 24.552 \approx 25 \frac{\text{km}}{\text{h}}$$

In class work

1-complete assignment

2- finish right side of worksheet first